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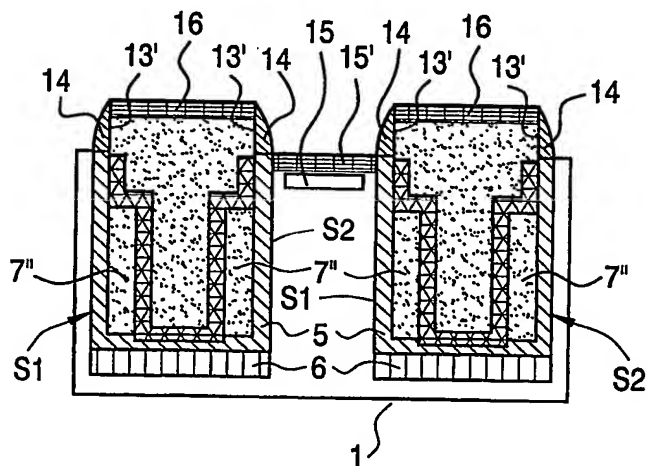
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(54) Title: VERTICAL SPLIT GATE NON-VOLATILE MEMORY CELL AND METHOD OF FABRICATION THEREOF



(57) Abstract: Semiconductor device comprising a vertical split gate non-volatile memory cell, for storing at least one bit, on a semiconductor substrate, comprising on the substrate a trench, a first active area, a second active area, a channel region extending along a sidewall of the trench, the trench having a length extending in a first direction and a width extending in a second direction perpendicular thereto and the trench being covered on the sidewalls by a tunnel oxide and including at least one gate stack of a floating gate and a control gate, wherein the control gate extends to the bottom part of the trench, a first floating gate is located at a left trench wall to form a first stack with the control gate, and a second floating gate is located at a right trench wall to form a second stack with the control gate.

WO 2004/057661 A2